

AMENDMENTS TO THE CLAIMS:

Claim 1. (Currently amended) An active matrix ~~LCD~~ liquid crystal display panel for use in an active matrix ~~LCD~~ liquid crystal display device, comprising:

a transparent insulating substrate;

a plurality of pixels arranged on said transparent insulating substrate and each ~~including~~ comprising a pixel electrode and an associated TFT thin film transistor; and

a passivation layer covering said plurality of pixels,

said TFT thin film transistor ~~having~~ comprising:

a gate electrode ~~including~~ comprising a transparent conductive film and a metallic film consecutively formed on said transparent insulating substrate,

a gate insulating film covering said gate electrode,

an island amorphous silicon (a-Si) layer formed on said gate insulating film, and

source and drain electrodes,

said passivation layer covering side ~~surface~~ surfaces and a top surface of said a-Si layer and having openings therein,

said source and drain electrodes ~~being in contact with~~ contacting said a-Si layer through the respective openings of said passivation layer,

said pixel electrode ~~including~~ comprising a transparent conductive film formed in a common layer with said transparent conductive film of said gate electrode, and

said source electrode ~~being in contact with~~ contacting said transparent conductive film of said pixel electrode though ~~the opening of~~ one of said openings in said passivation layer.

Claim 2. (Currently amended) The active matrix ~~LCD~~ liquid crystal display panel as ~~defined in~~ of claim 1, further comprising a gate storage capacitor comprising: wherein
a gate storage electrode formed in a common layer with said source and drain electrodes,
said passivation layer; and
an electrode formed in common with said gate electrode ~~constitute a gate storage capacitor.~~

Claim 3. (Currently amended) The active matrix ~~LCD~~ liquid crystal display panel as ~~defined in~~ of claim 1, wherein said a-Si layer has a shape substantially the same as a shape of said gate insulating film as viewed in perpendicular to a surface of said transparent insulating substrate.

Claim 4. (Currently amended) A twisted nematic mode liquid crystal display device comprising the active matrix ~~LCD~~ liquid crystal display panel ~~as defined in~~ of claim 1; ~~wherein said active matrix LCD panel is used in a TN-mode LCD device.~~

Claim 5. (Currently amended) The active matrix ~~LCD~~ liquid crystal display panel as ~~defined in~~ of claim 1, wherein portions of said a-Si layer ~~in contact with~~ contacting said source and drain electrodes are heavily doped regions.

Claim 6. (Currently amended) An active matrix ~~LCD~~ liquid crystal display panel ~~for use in an active matrix LCD device~~ comprising:

a transparent insulating substrate;₁

a plurality of pixels arranged on said transparent insulating substrate and each

including comprising:

a pixel electrode;₁

a counter electrode;₁ and

an associated TFT thin film transistor;₁ and

a passivation layer covering said plurality of pixels,

said TFT thin film transistor having comprising:

a gate electrode including comprising a transparent conductive film and a

metallic film consecutively formed on said transparent insulating substrate;₁

a gate insulating film covering said gate electrode;₁

an island amorphous silicon (a-Si) layer formed on said gate insulating film;₁

and

source and drain electrodes,

said passivation layer covering side surface surfaces and a top surface of said a-Si

layer and having openings therein,

said source and drain electrodes ~~being in contact with~~ contacting said a-Si layer

through the respective openings of said passivation layer,

said counter electrode including comprising a transparent conductive film formed in a

common layer with said transparent conductive film of said gate electrode,

said source electrode ~~being in contact with~~ contacting said transparent conductive film

of said pixel electrode through ~~the opening of~~ one of said openings in said passivation layer.

Claim 7. (Currently amended) The active matrix ~~LCD~~ liquid crystal display panel as ~~defined in~~ of claim 6, wherein portions of said a-Si layer ~~in contact with~~ contacting said source and drain electrodes are heavily doped regions.

Claim 8. (Currently amended) The active matrix ~~LCD~~ liquid crystal display panel as ~~defined in~~ of claim 6, wherein said passivation layer ~~includes~~ comprises a silicon nitride film and an overlying organic dielectric film.

Claim 9. (Currently amended) The active matrix ~~LCD~~ liquid crystal display panel as ~~defined in~~ of claim 6 8, wherein said organic dielectric film ~~includes at least~~ comprises one of an acrylic resin, benzocyclobutene, and a polyimide.

Claim 10. (Currently amended) The active matrix ~~LCD~~ liquid crystal display panel as ~~defined in~~ of claim 6, wherein said passivation layer ~~includes~~ comprises a silicon nitride film and an overlying silicon oxide film.

Claim 11. (Currently amended) The active matrix ~~LCD~~ liquid crystal display panel as ~~defined in~~ of claim 1, wherein said drain electrode ~~has a~~ comprises an oxidized top surface oxidized.

Claims 12-23. (Canceled)

Claim 24. (New) An active matrix liquid crystal display panel, comprising:

a gate electrode on a substrate;
a pixel electrode on said substrate;
a channel layer over said gate electrode; and
a passivation layer on said channel layer and covering a top and sides of said channel layer.

Claim 25. (New) The panel of claim 24, further comprising source and drain electrodes on said passivation layer, wherein said channel layer comprises amorphous silicon and said passivation layer comprises silicon nitride.

Claim 26. (New) The panel of claim 25, wherein said source and drain electrodes contact said channel layer through openings in said passivation layer.

Claim 27. (New) The panel of claim 25, wherein said source electrode contacts said pixel electrode.

Claim 28. (New) The panel of claim 27, wherein said source electrode contacts said pixel electrode through an opening in said passivation layer.

Claim 29. (New) The panel of claim 24, further comprising a gate insulating layer on said gate electrode.